

Transportation Funding: Q & A

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1. How much more revenue will we need?

I have consistently said we need "at least \$1.4 billion more" which was then revised to "at least \$1.542 billion more" after the March, 2012 updated run of the model. The model assumed we would be able to fully implement the pavement preservation methods of asset management, when in reality that will not always be possible. And, I have consistently said that the additional \$1.542 billion would only pay for pavement preservation, with the understanding that the current amounts spent for capacity improvements, addressing safety needs, transit, etc. would continue, but NO ADDITIONAL dollars would be available for those under the model. Some projects addressing safety needs, capacity improvements, etc. would occur, but at levels currently being funded with current funding levels. Note, the model only calculates how much additional money is needed, and is not intended as a policy recommendation on HOW the additional money is spent.

The bill package introduced in January at the Governor's request undershoots the mark, which is why I am now saying we need a package of additional revenue of **no less than about \$1.3 billion**. This is derived as follows:

- \$1.542 billion additional needed
- Minus about \$100 million be accounting for some sale tax money shifted to the MTF via PA 225 of 2012 (SB 351) (but note, this is only for the FY 2013, and will disappear unless extended),
- Minus some savings from SB 7 (80/20 or hard cap for health insurance premiums, now PA 152 of 2011), and HB 4701/4702 (the State Employee Retirement System reforms)
- Minus about \$70 million of ongoing savings MDOT has achieved in 2011 and 2012, and
- other potential hoped for efficiencies.

I have also suggested that there be a requirement for some local match, equivalent to 1 mill of property tax (although it could come from any local source) for road capital maintenance (i.e., not routine maintenance like pothole filling, snow plowing, roadside mowing, etc.). This will help stretch the money somewhat, but of unknown amount, as many, if not most, cities, villages, townships and counties put in some now. But, my main reason for recommending this requirement is that there needs to be some local skin in the game, some local responsibility.

In some cases, the local government has limited ability to provide the "match" required to do a project. This inability to match is sometimes caused by unwillingness to pay for the roads in their area. A case in point is Bedford Township in my district that has some of the worst roads in the state, but voters steadfastly refuse to approve even a 1 mill road millage. I had believed that we need to somehow earmark some of the new moneys for the townships, but only if they are spending at least the equivalent to 1 mill on roads (whether it comes from a road millage or their General Fund or some other source). They cannot expect to just have "someone else" bail them out. Upon my inquiry, MDOT has responded as follows, with which I concur (without any specific earmarking, with the money flowing through the road commissions, as is current practice):

"It is logical to require a local match for local roads, because it is not possible to provide sufficient state funds for the 80,000 miles of county local roads without a dramatic increase in user fees. The majority of the cost of these routes must inevitably be covered from local revenues.

Act 51 Section 13 (5) already includes matching requirements of cities and villages:

"Money distributed to each city and village for the maintenance and preservation of its local street system under this act represents the total responsibility of the state for local street system support. Funds distributed from the Michigan transportation funds shall not be expended for construction purposes on city and village local streets except to the extent matched from local revenues including other money returned to a city or village by the state under the state constitution of 1963 and statutes of the state, from funds that can be raised by taxation in cities and villages for street purposes within the limitations of the state constitution of 1963 and statutes of the state, from special assessments, or from any other source."

Similar language pertaining to county roads could be included in Section 12 [of Act 51]:

"Money distributed to each county road agency for the preservation of its local road system under this act represents the total responsibility of the state for local road system support. Funds distributed from the Michigan transportation funds shall not be expended for preservation or construction purposes on county local roads except to the extent matched from local funds, from funds that can be raised by taxation in counties or townships for street purposes within the limitations of the state constitution of 1963 and statutes of the state, from special assessments, or from any other source."

[Note, this would replace Section 15 of MCL 247.662 which currently reads as follows: "(15) Money distributed from the Michigan transportation fund may be expended for construction purposes on county local roads only to the extent matched by money from other sources. However, Michigan transportation funds may be expended for the construction of bridges on the county local roads in an amount not to exceed 75% of the cost of the construction of local road bridges."

Note also, MDOT has offered alternative language something like the following, which is more specific:

"MTF funds used by county road commissions on township roads shall be matched to some extent, with the goal that EACH township provideS funds equivalent in amount to one mill of property taxes for pavement preservation projects on all roads within the township, averaged over a three year period. "Township roads" shall mean ROADS WITHIN A TOWNSHIP AND UNDER THE JURISDICTION OF A COUNTY ROAD COMMISSION, AND CLASSIFIED AS ~~rural~~ minor collectors OR ~~and local roads rural local roads and urban local roads,~~ ACCORDING TO ~~as classified under~~ section 1006 of the federal intermodal surface transportation efficiency act of 1991, public law 102-240. Township funds may come from a road millage or other sources as EACH ~~the~~ township may elect."

Obviously, some work is needed to reconcile the two suggested wordings.]

It may not be reasonable to expect local units to rely on a particular source (such as 1 mill or the equivalent) owing to the large differences in local tax bases. The language added needs to make clear the intent that improvement to local roads must involve a local contribution, and yet be flexible enough to allow local governments to find those matching funds through whatever means are at their disposal.

It is not appropriate to require local units to match state aid for arterials and major collectors. In particular, with the passage of the new federal reauthorization bill, principal arterials under local jurisdiction have been added to the National Highway System. As a result these routes will be subject to additional federal project oversight, asset management, and performance measurement related to condition and operation. The penalty for failure to meet the as-yet-to-be-established performance

targets on the National Highway System would be the redirection of federal funds. It will be important to ensure that principal arterials under local jurisdiction receive appropriate consideration and are improved in a timely fashion as asset management decisions are made going forward.”

Transit needs can be funded under the current amounts allocated, supplemented by local levies via the optional regional registration fees (HB 5311 and 5312/SB 911 and 910). Would additional money be desirable for rail improvements, etc. identified in the TF2 report? Surely, but I would not recommend any further increases due to political realities.

The study we did assumed NO additional money for new or widened roads. With current funding, some new roads and widening is occurring, and the assumption is that a comparable amount would continue to be spent in that way, with the new money being used to maintain our existing pavements and bridges. For example, the 2012 – 2016 MDOT Five-Year Transportation Plan contains the following, which was assumed to remain at about those levels, upon which the new revenue could be added.

Category	Five-Year Total (millions)
Routine Maintenance	1,343
Repair & Rebuild Roads	2,151
Repair & Rebuild Bridges	962
Capacity Improvement & New Roads	385
Safety & System Operations	638
Other	520
	<hr/> 5,999

The 2008 TF2 report recommendation for \$3 billion additional revenue included some additional money for new or widened roads.

Additional Funding Suggested by TF2 at the "Good" Level

(in millions of dollars per year)

	MDOT	Locals	Total
Capacity Improvements and Border Crossings	675	233	908
Safety and ITS	35	118	153
Other Highway Facilities	10	9	19
Highway Maintenance	54	474	528
	<hr/> 774	<hr/> 834	<hr/> 1,608
Road and Bridge Preservation - 2011 Study			<hr/> 1,377
Total			<hr/> 2,985

The conclusion that can be drawn is that by the time you add all of the other “needs” considered in the TF2 report, the results are comparable. This is one reason I have repeatedly said, “\$1.5 billion is the minimum we need additional.”

2. “Transportation Funding Findings to Date and Conclusions Reached” is now online with all of the original sources hyperlinked at <http://ourmiroads.com/findings%20and%20conclusions.html> Numerous studies have been utilized, including five in which I was personally involved. The conclusions reached are:

- We need at least \$1.542 billion additional funding or savings to maintain our roads and bridges and achieve the 95%/85% good or fair condition in the next 12 years.
- To avoid another \$1.8 billion cost to the taxpayers caused by delay, action needs to be taken timely in 2012 to avoid missing the 2013 construction year as well. Time is not on our side.

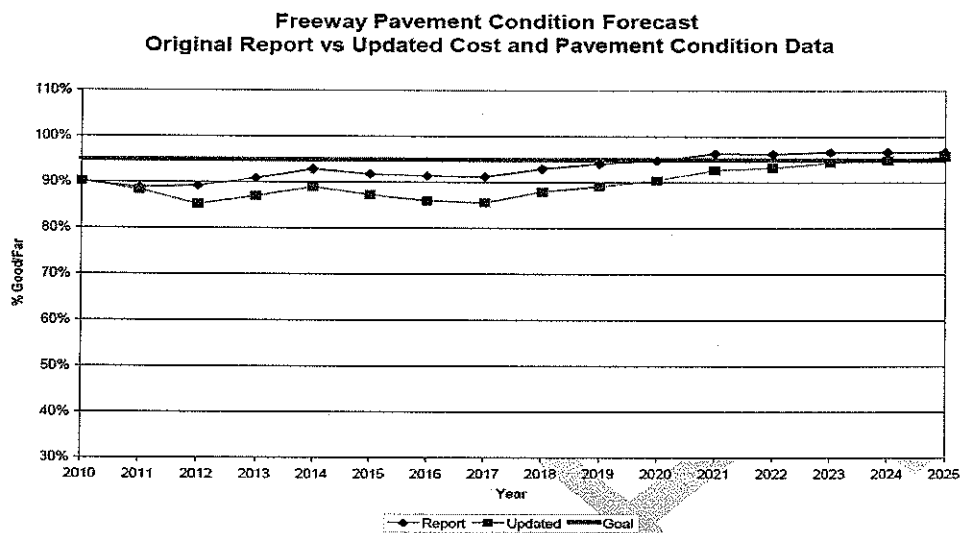
- We need to be bold in filling the funding gap in one fell swoop, as incrementalism does not achieve the goals.
- Doing less than the total need would expend considerable political capital and end up disappointing the taxpayers with higher costs, but no better roads. That is, if we are to take action, we might as well achieve the goals, rather than take the potential political heat for the higher costs AND still have poor roads.
- While it will cost motorists money in terms of higher gas taxes and vehicle registration fees, there will be offsetting savings in vehicle repairs, longer life vehicles, safety, etc.
- There are both short term job benefits and long-term benefits of creating an environment for businesses to flourish from maintaining our roads and bridges.
- There is not enough fraud, waste and abuse in the system to eliminate which would fill the funding gap calculated in other studies. Nonetheless, control of these costs remains important and continued efforts are warranted.

3. Would the \$1.3 billion additional just maintain our current road condition or improve it?

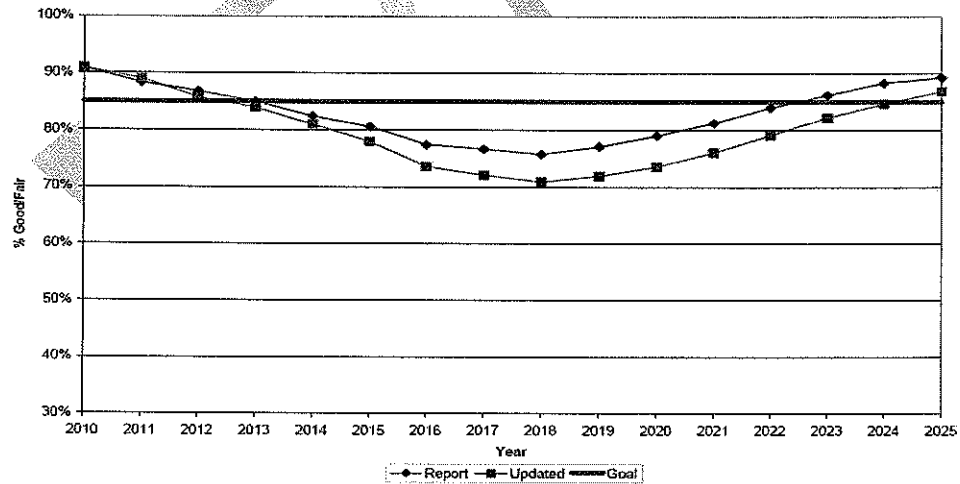
The studies linked above initially set a goal of 95% “good or fair” on freeways and 85% “good or fair” on other paved roads. The \$1.542 billion need calculated would achieve those goals within 12 years, so improvement would be seen. See the charts from the original studies below.

Note that despite the additional funding projected in the following graphs from the 2012 Updated Report, the average quality of the non-freeway trunkline pavements will actually decline for a few years before showing improvement. This is because enough of the roads cannot be worked on at the same time to prevent the average deterioration, without causing unreasonable traffic congestion due to road construction. The non-trunkline roads would see substantial improvement over the 12 years with the additional investment – climbing from their abysmal 53% and 55% good or fair current levels.

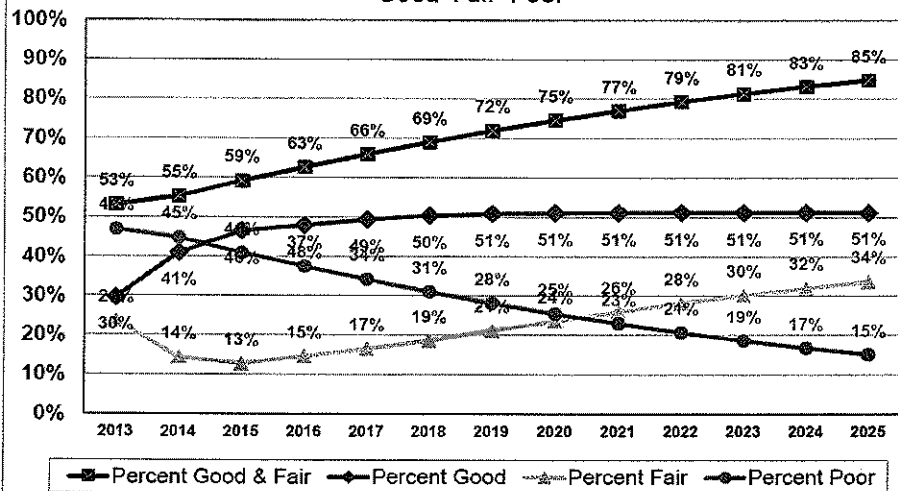
It should also be pointed out that when we say “good or fair”, we don’t mean the 85% would be all good. Fair is included, and if you look at the road conditions that rate “fair”, you will see that they can be far from good.



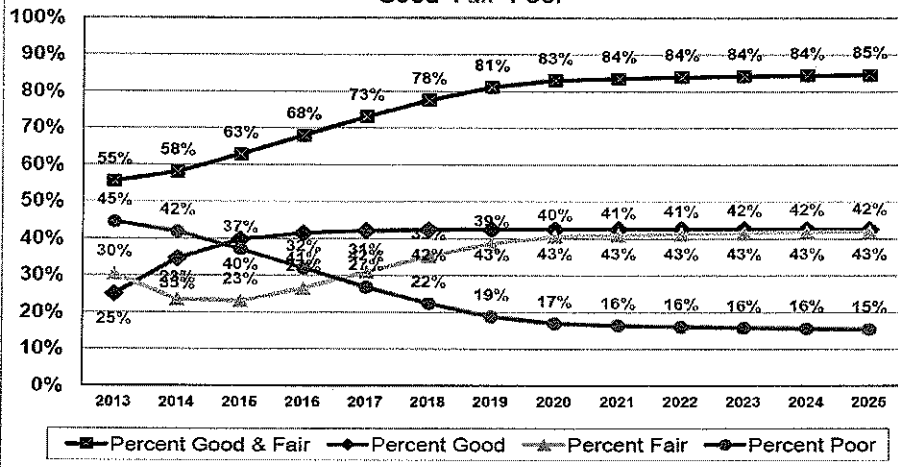
Non-Freeway Trunkline Pavement Condition Forecast Original Report vs Updated Cost and Pavement Condition Data



Forecast of Pavement Condition Non-Trunkline Paved Federal Aid Good Fair Poor



Forecast of Pavement Condition Paved NonFederal Aid Good Fair Poor



4. While the models cited above set quality targets and then calculate how much it would take to achieve those targets, what if we simply lower our goals? How much less would that cost?

Some states have "tier 1" and "tier 2" roads, and just forget about the tier 2 roads. I don't take quite that approach, but in the model our goal was for 95% good or fair for the state trunkline roads which carry most of the traffic and 85% good or fair for the non-trunkline roads. We also looked at the "savings" of lowering the goals.

With the original model run in 2011, the following were calculated. I assume the 2012 model run would be similar, but we did not take this extra step with the updated model.

- \$105 million if set target percentage of freeways that are rated "good" or "fair at 90%, instead of 95%.
- \$146 million if set target percentage of non-freeways state trunkline highways that are rated "good" or "fair at 80%, instead of 85%.
- \$70 million if set target percentage of federal aid, non-trunkline highways that are rated "good" or "fair at 80%, instead of 85%.
- \$58 million if set target percentage of non-federal aid roads that are rated "good" or "fair at 80%, instead of 85%.

These reductions in goals are NOT recommended, but simply provided for information. Unfortunately, the savings may be illusory unless we only neglect the roads that need total reconstruction, for if we neglect roads prior to their needing total reconstruction, not doing the preventive maintenance only increases the eventual cost. To implement these lower goals would be to leave bad roads bad for extended periods of time, with negative public backlash. That is why conclusion 4 states "Doing less than the total need would expend considerable political capital and end up disappointing the taxpayers with higher costs, but no better roads. That is, if we are to take action, we might as well achieve the goals, rather than take the potential political heat for the higher costs AND still have poor roads." and conclusion 3 says "we need to be bold".

5. How should we raise the additional \$1.3 billion revenue?

The funding bills introduced in January would bring in an estimated \$1.051 billion of additional revenue. The funding bills are:

- **Gas Tax at Wholesale Level Tied to Wholesale Price of Fuel.** House Bill 5298 (Olson)/ Senate Bill 918 (Kahn) would convert the current fuel taxes from a flat amount (19 cents for gasoline and 15 cents for diesel fuel) to a variable rate tied to the wholesale price of gasoline. The initial rate would be 28.3 cents per gallon for both gasoline and diesel fuel for the first year. Thereafter, the fuel tax would be set at the "applicable rate" of 10.1% times the previous year's average wholesale price of gasoline, but could not go up or down more than 1 cent per year, and could not go higher than 40 cents. (The applicable rate of 10.1% was selected by calculating the rate necessary to initially generate \$541 million more revenue than the current fuel taxes.) "Parity" between the tax on gasoline and diesel fuel is achieved as the current diesel discount of four cents per gallon is eliminated.
- **Repeals 15 Cent Diesel Fuel Tax.** House Bill 5299 (Olson)/Senate Bill 920 (Kahn) would amend the Motor Carrier Fuel Tax Act to fully complete the conversion to a wholesale tax. This bill strikes the current fuel tax of fifteen cents for qualified commercial motor vehicles along with other

fuel tax rates. These would be replaced by the wholesale rate in House Bill 5298/Senate Bill 918.

- **Vehicle Registration Fee Increase.** House Bill 5300 (Gilbert and Olson)/Senate Bill 919 (Kahn) would increase statewide registration fees for most passenger vehicles by 67%. Weight-based fees for commercial trucks would increase 25% (but those are likely to also be affected by loss of the diesel discount proposed in HB 5298/SB 918). This would raise an estimated \$500 million for transportation purposes.
- **County Optional Registration Fee.** House Bill 5312 (Geiss)/Senate Bill 910 (Warren) would allow counties to ask voters to approve a county optional registration fee to fund transportation programs and projects. The county board of commissions would have to pass a resolution approving such a fee not less than 70 days before voters are asked to approve the fee. The fee would not be implemented if voters reject the idea at the polls.

I recommend the funding bills be amended to get the \$1.3 billion extra, by getting additional revenue via eliminating the registration fee discounts and a couple of additional cents per gallon for fuel. \$1.051 billion + \$150 million + \$88 million = \$1.289 billion. Hopefully by lame duck session gas prices will have fallen even more than it has in recent weeks so the additional gas tax will not seem as hard a hit to the pocketbooks.

Upon inquiry for further information regarding the elimination of the registration fee discounts, MDOT replied as follows:

"According to Aarne Frobom, Transportation Planning Specialist, Policy Section, Bureau of Transportation Planning, Michigan Department of Transportation, "The three 10% reductions in ad valorem tax over the first three license-plate renewals reduce MTF revenues by around \$150 million/year. That is, if the reductions had not been enacted, ad valorem taxes would be about 23% over what they are now.

This is a rough estimate, and assumes that average vehicle life is 14 years.

If the three reductions are repealed for newly-purchased vehicles only, ad valorem revenues will increase slowly as the vehicle fleet turns over. There would be no revenue increment in the first year, and small ones in the 2nd and 3rd years. In the fourth year and every year thereafter for about 14 years, ad valorem revenues would rise by about 1/14 of \$150 million, or about \$10.7 million more each year, until the full increment of \$150 million is received when most pre-2014 vehicles are retired.

This assumes existing numbers of vehicles and taxable values. This is conservative. Exact estimates are not possible, owing to uncertainty over the value of future car registrations.

At the level of the individual taxpayer, repealing the three 10% reductions equals a tax increase of 27.1 per cent over most of the years of a vehicle's life. The tax rate would stay at 0.005 of the vehicle's list price, instead of declining to 0.003645 for years after three."

According to Polly Kent, Division Administrator, Intermodal Policy Section, Bureau of Transportation Planning, Michigan Department of Transportation, "If we increase the registration fees 60%, one could assume that the value to the MTF of eliminating those decrements would also increase 60%, about \$90 million."

6. Will The Recommended Increases Provide the Stream of Revenue Needed Over the Next Ten Years?

As indicated in my presentation to the Senate Transportation Funding Task Force, the revenue increases needed are not static amounts, but an increasing need over the next twelve years projected using a 5% construction cost inflation factor and assuming all other revenue sources remain constant. HB 5298, the gas tax increase bill, has the actual gas and diesel fuel tax tied to the wholesale price of fuel, so that the tax per gallon may go up (or down) through the years, with the proviso that the rate could not go up (or down) more than 1 cent per year. That provides some inflation protection, assuming energy prices continue upward. Further, the phase in of the vehicle registration fee discounts will increase revenues somewhat over the years. Also, as vehicle prices increase, the vehicle registration fees which are tied to the manufacturers' list prices should also increase somewhat over time. But, this recommended funding package should sunset in 10 years to force a new, fresh look.

- 7. Are There Other Viable Options?** We have looked at multiple options, individually as well as the Governor's Work Group on Infrastructure in the summer and early fall of 2011. The combination of gas tax and vehicle registration fees is a tradeoff between two revenue raisers that each have disadvantages. Increases in the gas tax makes the Ohio – Michigan difference even worse (due to Ohio not imposing the sales tax on gasoline and Michigan's sales tax on gasoline not going to roads). Obviously, increases in vehicle registration fees hit those with multiple vehicles hard, especially if they drive some vehicles very little, such as a motor home. There is no good solution, but if we don't invest more for roads soon, we will pay MUCH more later. So, we need to select the least bad combination that will solve the problem.

We know that the gasoline tax is NOT the long term answer, with the trend toward higher mileage per gallon vehicle and even electric cars. But, it will be part of the solution for the foreseeable future. I have proposed a mileage based user fee (without devices). I would like to see as part of this funding package a study of mileage based user fees in general as this will likely be the revenue generating mechanism in the future, perhaps as follows:

"MDOT shall research and prepare a report to the Governor and the Legislature within one year of enactment of this bill summarizing the status and results of other private, state, federal and international efforts, studies or analyses to implement transportation user fees based on vehicle miles traveled, or mileage-based user fees, including, but not limited to, systems with or without devices in cars."

Upon inquiry, MDOT responded that they did not believe this language was needed, but might provide cover for them (from legislators who oppose mileage based user fees based on devices) to do the report. They said:

"In 2002, MDOT was part of a multi-state study of alternative user fees structures, including mileage-based user fees, but was compelled to withdraw from that study when legislation was introduced that would have prohibited further participation. Since then, bills with similar prohibiting language have been introduced twice more. MDOT does stay abreast of work in other states to pilot or research alternative user-fee structures, and there are a number of publications readily available to support a debate on this issue."

- 8. Sales Tax Increase?** Increases in sales taxes would require a 2/3 vote in each house and a vote of the people, making that avenue a non-starter. I see any discussion of amending the sales tax as a diversionary discussion, aimed to stall or kill any revenue increase. The sales tax on gasoline NOT going to the Michigan Transportation Fund is one of the major problems we have, but one we should deal with separately, if we are going to make any progress in the near future.

9. **Proposal A vs. Proposal B Approach?** Some people have asked whether it would be possible to put a proposal on the ballot regarding transportation funding. If property tax reform efforts prior to Proposal A's ultimate success in 1993 are any guidance, putting a proposal on the ballot as a "Yes or No?" question is not recommended, as numerous property tax proposals were put on the ballot before 1993 unsuccessfully as "Yes or No?" questions. It was not until voters needed to choose between two options that reform was achieved.

Thus, if this idea is pursued, it is essential that the legislature first adopt a statutory solution as was done in 1993, with majority votes in each house of the legislature in a bi-partisan effort, and then to give the voters a choice, concoct a Proposal B that the voters could select as an alternate. Assuming this alternate is a change in the sales tax, to cure the long standing problem of the sales tax revenues on gasoline not going to roads and bridges, this would take a 2/3 vote in each house and a vote of the people to amend the Constitution.

Presumably, once there is a statutory solution, a few more votes can be obtained under the basis of wanting to give voters a choice. The statutory solution consists totally of user fees, which are an exception to the Taxpayer Protection Pledge, while the alternatives considered for the voters would not be.

A potential ballot Proposal B might be something like this:

- \$1115 million from increased sales tax 1% (per Citizens Research Council Tax Guide for 2010-11). The 7% would bring Michigan equal to the 7% that Indiana levies.
- Minus \$818.3 - 941.7 million (\$3.50 - \$4.00 gasoline) from elimination of sales tax on fuel
- Minus \$157.3 from the \$1115 million estimate due to fuels no longer in the tax base for the sales tax increase

So far, we are up \$139.4 million, assuming \$3.50 per gallon average gasoline price or \$16 million assuming \$4.00 per gallon. To get the remaining needed to reach the \$1.3 billion minimum needed (assuming the best case scenario of \$3.50 per gallon):

- \$943.9 million - Raise gas tax 16.2 cents to bring back to same consumer total gas price. Logic: if under HB 5298 with increase of 9.3 cents will raise \$541 million, the gas tax would need to be raised 1.744 times that to raise \$943.9, or $1.744 \times 9.3 \text{ cents} = 16.2 \text{ cents per gallon}$. The total tax would be $19 + 16.2 = 35.2 \text{ cents per gallon}$, within the range of other Midwestern states.

Midwestern State Comparisons

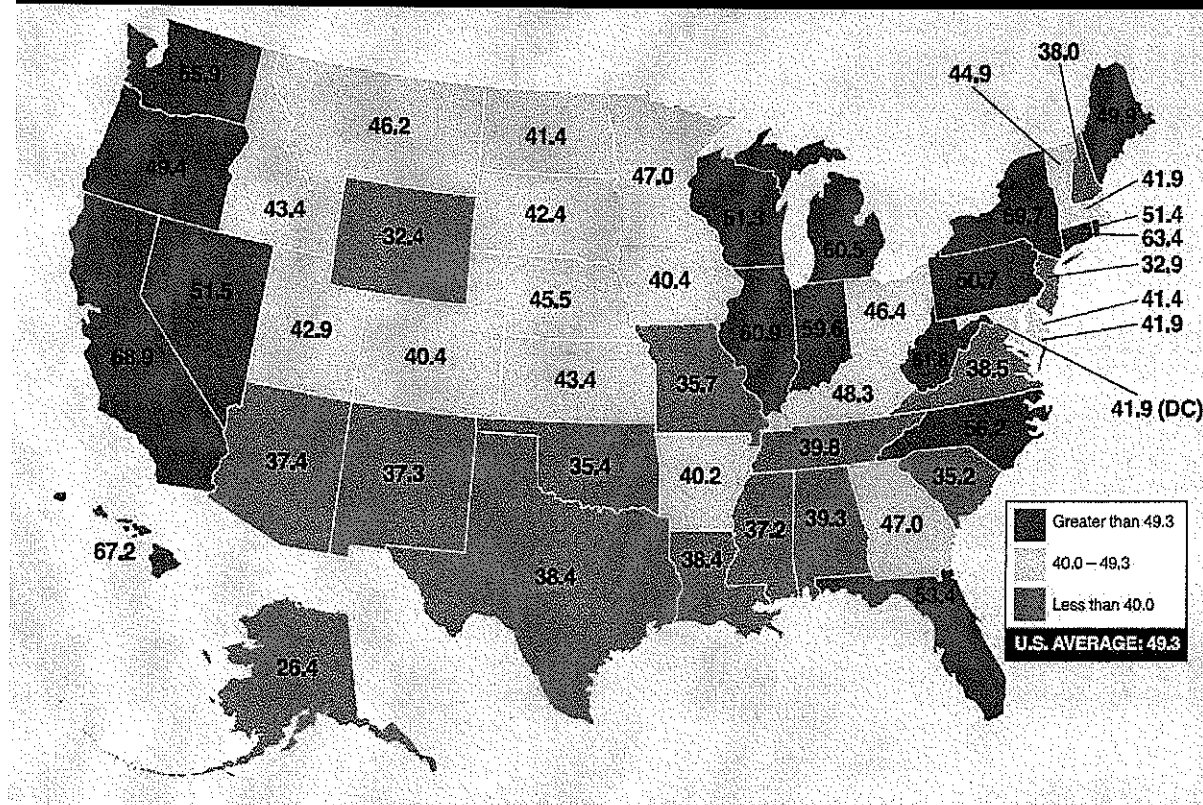
State	Sales Tax %	Total Tax on Gas (cents)
Indiana	7.000	34.1
Illinois	6.250	39.0
Minnesota	6.875	27.2
Ohio	5.500	28.0
Wisconsin	5.000	32.9

<http://www.taxfoundation.org/publications/show/245.html>

- \$217 million – about 27% increase in vehicle registration fees or raise gas tax an additional 4.3 cents (vehicle registration fees seem to have the greatest resistance, but putting the increase totally on increase gas tax avoids the electric and hybrid vehicles – other than the increased sales tax)

10. How does Michigan's gas tax rate compare with other states'?

The quick answer is to show the map of the U.S. with the total of tax paid on gasoline by state, as follows:



What this map fails to show is the impact made on the total by the sales tax on gasoline. On November 6, 2012, MITA shared with the Senate Transportation Funding Task Force that Michigan is one of six states that charges sales tax on its motor fuel and, with the exception of fiscal year 2012 / 2013, the only state that does not dedicate any of the revenue collected for sales tax on gasoline for its transportation system. MITA shared the following data on how other states that collect sales tax on gasoline invest that money into their infrastructure.

- California - 2.25% - All gas tax and sales tax on gas constitutionally dedicated to transportation.
- Florida - 6% - Majority of "fuel sales tax" is distributed to the State Transportation Trust Fund.
- Michigan - 6% - All revenues from the last 2 percent of the sales tax go to the state school aid fund. Of the revenues from the base 4 percent tax on all items, 15 percent is distributed to cities, villages and townships, and 60 percent to the state school aid fund. After those set-asides, of the remaining sales tax collected on motor fuels and other vehicle-related items only, a variable amount is allocated to the Comprehensive Transportation Fund. The balance goes to the general fund. (The exception is the approximately \$100 million that will go to the Michigan Transportation Fund for FY 2012-13 via PA 225 of 2012 (SB 351).
- Illinois - 6.25% - 20 percent of all general sales tax revenue goes to local and regional projects which can include transit.
- Indiana - 7% - 0.8 percent of revenue from 7 percent general sales tax goes to transportation.
- Georgia - 4% - 75 percent of the revenues generated from sales tax on gasoline are constitutionally dedicated to transportation.

When Michigan's gas and diesel fuel taxes are compared with other neighboring states without the sales tax. We currently look like about in the low to middle range.

<u>State</u>	<u>Gasoline</u>	<u>Diesel</u>
Illinois	19	21
Indiana	18	16
Michigan	19	15
Minnesota	28.6	28.5
Ohio	28	28
Wisconsin	32.9	30.9

Source: http://www.michigangasprices.com/tax_info.aspx

11. How can we be sure we are getting value for our hardworking taxpayers' dollars?

The answer to this question is multi-part. There are some things we can do, but there are many apparent options that have not panned out after extensive investigation.

A. Potentials:

(1) Asset Management and Pavement Preservation - How Are We Doing in Michigan?

One thing we must do to get the greatest value for our money (or the biggest bang for our bucks) when spending taxpayers' money on road and bridges is to fully implement at both the state and local levels the asset management approach to maintaining our highways. See http://ourmiroads.com/asset_management.html for the detailed rationale.

Michigan is currently a leader among the states on this at the MDOT level, but pushing it down to the local levels may increase the use of more pavement preservation methods based on lowest cost life cycle cost analysis. The new federal re-authorization of the distribution of the federal gas tax (MAP-21) requires this for use of the federal dollars, so we need to fully utilize this flexibility in Michigan.

Without additional dollars, however, it will be hard for local agencies to avoid spending dollars on a "worst first" approach when some of the roads are in such bad and hazardous condition that their constituents demand those roads be fixed.

But first, it might be instructive to see how well we are doing now in focusing on pavement preservation. Unfortunately, there can be some confusion on the term "preservation" because as currently defined in Act 51 (more specifically MCL 247.660c) preservation includes virtually everything except new construction, including reconstruction and rehabilitation of roads. I.e., the current definition does not more precisely focus on the current pavement preservation tactics that typically are employed in the early years of a road's life which cost effectively extend the life of the pavement without adding to its structural capacity. "Preventive maintenance" is the closest we come to "pavement preservation" for which we have data.

The data from MDOT for the FY 2007-FY 2011 period shows \$531,879,389 spent on road preventive maintenance on the state trunk line system, \$1,030,446,900 on road rehabilitation, and \$977,177,515 on road reconstruction, compared with \$555,127,326 for new construction/capacity improvements. Counting bridge projects, MDOT spent 78% of the total spent in 2007 on preservation of one type or the other, 89% in 2008, 82% in 2009, 95% in 2010 and 78% in 2011. Looking ahead to the FY 2012-FY 2016 period in the current five year plan, the percentages are 89%, 82%, 98%, 100% and 98%.

The local data MDOT was able to compile shows an even greater shift from new construction towards preservation of our current system. Nonetheless, it is impossible from this data to determine whether road agencies are truly adopting the "pavement preservation" method of implementing asset management because even reconstructing or rehabilitating the "worst first" currently qualifies as "preservation". A more precise definition of what constitutes pavement preservation is needed, probably something along the lines of "road treatments or projects that extend the life of the pavement without structural improvement or leveling (i.e., not PASER 1, 2, 3 or 4 ratings) with the goal of minimizing the long term cost of retaining the pavement".

FY 2007 - FY 2011 MTF (Act 51 Reported) Construction and Preservation Expenditures					
	FY2007	FY2008	FY2009	FY2010	FY2011
Counties					
Road Construction	60,979,627	71,425,857	43,374,980	35,571,728	40,994,086
Bridge Construction	4,135,383	9,084,452	4,968,826	7,608,512	1,945,648
(1) Road Preservation Projects	345,019,499	400,837,960	319,311,369	340,136,007	282,134,610
(1) Bridge Preservation Projects	65,646,653	63,445,786	60,194,179	55,525,315	56,403,389
Total County	475,781,163	544,794,055	427,849,354	438,841,561	381,477,732
Cities and Villages					
Road Construction	62,373,080	61,848,857	43,669,474	34,002,702	42,579,810
Bridge Construction	4,226,915	5,167,952	1,311,586	1,056,484	2,453,041
(4) Road Preservation Projects	407,839,010	428,903,881	451,878,608	392,503,524	357,337,340
(4) Bridge Preservation Projects	20,649,693	12,382,045	20,129,939	13,547,648	11,014,134
Total City and Village	495,088,698	508,302,735	516,989,607	441,110,358	413,384,324
(1) County Preservation category is similar to MDOT categories of Rehabilitation plus CPM.					
(2) FY 2011 County expenditures do not include immaterial adjustments from audits of Act 51 Annual Reports.					
(3) FY 2011 expenditures for City/Village includes 521 of the 533 agencies. All major cities are included.					
(4) City/Village expenditures in the Preservation category include some maintenance activities.					

Regardless of the definition, it will not be possible for Michigan to fully implement the asset management approach, at least with the concept of pavement preservation incorporated, unless there are more dollars with which to work. Taxpayers are unlikely to understand why a road is being sprayed with rejuvenator early in the new pavement's life, or chip sealed, while roads in much worse condition or even safety hazards are not improved. Only significant progress in improving our roads will convince taxpayers that their gas tax and vehicle registration fee dollars are well spent.

The independent Office of the Auditor General (OAG) gave MDOT's efforts to measure pavement condition a top rating of "effective" and touts MDOT's "efficient" system of pavement measurement, the result of a performance audit of the Michigan Department of Transportation's (MDOT) measurement of state highway pavement conditions over a three-year period. <http://www.michigan.gov/mdot/0,4616,7-151-9620-273051--,00.html> (March 8, 2012 release) Rating the roads is one first essential step, but without proper follow up, the ratings might simply record a continued decline in the quality of our roads.

Bottom line: The "best practices" bills could be amended to include some requirement for asset management via pavement preservation. Alternatively, and probably better, would be to mirror the definitions of "asset management" and "pavement preservation" in the federal law by placing the following in the asset management section, Act 51 section 9(a), MCL 247.659a:

"The term 'asset management' means a strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on both engineering and economic analysis based upon quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and

replacement actions that will achieve and sustain a desired state of good repair over the lifecycle of the assets at minimum practicable cost.” H. R. 4348 (2012) MAP-21 Sec. 1103(2).”

Pavement preservation programs and activities shall be the techniques used to implement asset management. The term ‘pavement preservation programs and activities’ means programs and activities employing a network level, longterm strategy that enhances pavement performance by using an integrated, cost-effective set of practices that extend pavement life, improve safety, and meet road user expectations.”

Submitting the asset management plan to the Transportation Asset Management Council needs to be more of a requirement. The TAMC will likely need additional resources to implement the review process to more asset management plans that it currently receives. Road agencies that do not receive federal funds or who do not have arterials or major collectors could be exempt from the reporting requirements.

Also, consideration should also be given to exempting road agencies that receive less than a certain amount. Under my proposed SHB 5303, there would be 28 that would receive less than \$50,000, 70 more between \$50,000 and \$75,000, and 53 more between \$75,000 and \$100,000. The smallest road agencies probably have the fewest staff resources and the least amount of expertise to provide an asset management plan. If you’re receiving only \$100,000 per year, you’re probably not doing much more than plowing snow and filling potholes, with occasional larger projects done with bond money or in cooperation with other road agencies.

(2) Buy-Out of Local Federal-Aid Dollars.

Both MDOT and local agencies receive “federal-aid dollars” (i.e., a partial return of the federal gas tax collected in Michigan and sent to Washington D.C). With those federal-aid dollars come numerous strings attached. The additional requirements, and the costs of those additional requirements, could be minimized by MDOT “buying out” federal-aid received by local road agencies, such that the federal-aid money could be concentrated in fewer, larger projects conducted by MDOT, with more of the smaller, local projects free of the additional red tape and expensive requirements. This is not possible for all federal-aid received by local agencies, as some is earmarked for special purposes, but a substantial amount (38% of federal-aid going to local road agencies according to MDOT) could be bought out by MDOT (\$91.2 million in FY 2013, according to a 11/2/2012 MDOT memo, but this did not include all categories of federal-aid flowing to the local agencies, so potentially even more than that with the more flexible funding under the new federal authorization MAP-21).

Therefore, MCL 247.660o should be amended to encourage, but not require MDOT to trade its STF dollars for local road agencies’ federal aid dollars to the extent allowed by federal law, on an 85% STF to local federal aid basis and to the extent possible while still providing the match required under federal law to receive the federal aid dollars. [Note, MDOT used to buy-out the federal aid at a 75 cents on the dollar basis, to make up for the additional requirement it would need to comply with, but I recommend the percentage recommended in the following MDOT report.]

MDOT did an extensive study report on this technique in August, 2002 entitled “Complete Study of Local Federal-Aid Buy-Out Using STF”. There they found substantial benefits for both MDOT and the local agencies. The practice died out when the state began having trouble making the match needed for MDOT to qualify for the federal transportation dollars. But, with additional funding proposed in the current transportation funding package, making the match would no longer be an issue, and MDOT could resume its practice.

Examples of savings include escaping federal design requirements that exceed what is appropriate for the specific conditions, such as excessive width of country bridges with minimal daily traffic, “sidewalks to

nowhere”, as well as burdensome reporting requirements that require not only time to perform but also just to learn how to do it by beleaguered local road agencies, and the list goes on and on.

This expansion of the buy-out practice could be accommodated by making explicit the implied authority to do so in MCL 247.660o(4). MDOT would need to work out the guidelines of the program and need not, or perhaps should not, be spelled out in the statute. There may be requirements that projects undertaken with bought out funds be put out to public bid, compliance with federal requirements and performance measures for arterials under local jurisdiction but upon which the state will be held accountable under the new MAP-21 accountability standards, compliance with the local agency’s asset management plan, and perhaps matching requirements that replace the federal-aid matching requirements. But, these details need not all be established in the statute.

(3) Warranties on Road Construction? Some people complain that roads are not built well anymore and that contractors should be held more accountable. Act 51 section 11(2) (MCL 247.661) contains the requirement that a warranty be obtained, where possible, for work on state trunkline highways. Could this be extended to other work where MTF funds are used? On other than local roads, for example? What is the MDOT experience with warranties? Frequency of use? Frequency of enforcement?

MDOT has replied as follows:

“MDOT is currently actively engaged with stakeholders on the warranty issue to assess the effectiveness and future direction of the warranty program. Meetings with stakeholder groups have been scheduled beginning in December, 2012.

Pavement Warranties

In MDOT’s pavement warranty guidelines there is a decision tree that is followed to determine when to warranty a pavement project. The default is to warranty Reconstruction & Rehabilitation projects and Capital Preventive Maintenance projects.

Through the 2011 construction season MDOT has had:

- 1499 Capital Preventive Maintenance Warranties
- 548 Reconstruction & Rehabilitation Warranties
- Average of 114 CPM and 46 R&R warranties per year over the past nine years
- 157 road warranties have had corrective work done or are awaiting corrective action

Bridge Warranties

Through the 2011 construction season MDOT has had:

- 234 Bridge warranties
- 26 on average per year
- 110 bridge warranties have had corrective work completed or are awaiting corrective action

As noted in the October 2 presentation to the Senate Task Force on Transportation, MDOT is a national leader in this area.

MDOT does not recommend requiring local agency use of warranties at this time. It would be a better first step to hold them to stricter asset management processes in advance of encouraging – rather than requiring – them to issue warranties, for the reasons described below:

MDOT has a much more sophisticated pavement management system than most local agencies and better records of historical performance. These were used extensively in developing MDOT’s

warranty program, and MDOT was diligent about ensuring the validity of the data before proceeding with the program. It would be difficult for local agencies to set up proper warranty thresholds without similar tools. Administration of the warranties after projects are completed may also be an issue for local agencies who do not have the staff and resources to commit to such an effort. MDOT has set up a warranty database and committed resources to the inspection and administration of warranties.

MDOT considered the question of warranties on local agency projects several years ago, but it is a significant policy shift that would need to be approved by the State Transportation Commission, and that has not yet been undertaken. MDOT staff did go so far as to develop a draft a decision tree tool and an implementation plan for local agencies wishing to use warranties. The draft decision tree and implementation plan are . . . still in the draft stage . . . “

B. Dry Holes Drilled – Diversions that did not pan out.

(1) Can we get more of our federal gas tax money returned to Michigan?

In the past we have actually received more than 100 cents on the dollar due to federal General Fund money being added to the fuel tax pot of money. With that General Fund money disappearing in the future, we will again be a donor state. However, with the funds being allocated to a great extent to fund the interstate highway system, including in states with many miles of freeway per capita (Wyoming, Montana, the Dakotas, to name a few), our prospects of getting more are dim. We will need to do what we as legislators can do in Michigan, and not expect the feds to rescue us. If it were possible, it would have happened when the Democrats controlled both houses of Congress and we had our Michigan Senators and Congressmen in key leadership roles.

(2) Why Don't We Just Change the Weight Limits for Trucks Which Cause Most of the Road Damage?

First, it is clearly a loaded question, as trucks may not cause all or perhaps even most of the road damage.

At the heart of this question is the fact that Michigan has higher weight limits for the entire truck than all other states. Here is what I have found on the MDOT website at

http://www.michigan.gov/documents/mdot/MDOT_MI_Truck_Weights_232489_7.pdf

“ . . .

Since 1982, federal law has required states to allow gross vehicle weights of 80,000 pounds on the Interstate system and other designated highways. These 80,000 pounds are typically spread over only five axles, including a three-axle tractor with tandem axle semi-trailer--the typical “eighteen wheeler” combination.

Michigan and several other states allow gross weights greater than 80,000 pounds, when spread over a larger number of axles. These weights are allowable under “grandfather clauses” in federal law.

Michigan's Policy

Michigan's truck weight law is designed to control axle loads instead of gross vehicle weight. Research conducted by the American Association of State Highway and Transportation Officials, the Michigan Department of Transportation (MDOT), and other organizations, has shown that pavement damage is directly related to axle loadings, not gross vehicle weight. Michigan limits the weight

allowed on individual axles, depending upon the spacing between them, with a maximum of eleven axles.

The maximum gross vehicle weight allowed on a "federal-weight-law truck" is 80,000 pounds, with four of its five axles carrying 17,000 pounds each. The calculated maximum allowable gross vehicle weight on the heaviest "Michigan-weight-law truck" is 164,000 pounds, which can only be achieved with the use of eleven properly spaced axles. Most of these axles carry only 13,000 pounds each.

It would take two and a quarter 80,000 pound trucks to carry the same cargo as a single 164,000 pound Michigan truck. Pavement research has shown that these two smaller trucks actually cause about 60% more pavement damage than does the single heavier truck, because of their higher axle loadings and the extra weight of additional tractors at about ten tons each.

... "

I have also inquired whether there has been any independent research about the relative damage a "standard" five axle truck at 80,000 pounds versus a truck with a gross weight of 164,000 pounds with 11 axles. The only study I found was one conducted at MSU in which the findings were:

- No statistically significant difference in cracking on concrete pavements and
- Somewhat greater rutting with the heavier trucks on asphalt pavements, especially on hot days. The researchers believed that the rutting effect has as much to do with the frequency of the tires compressing the road without sufficient time for the asphalt to "rebound" as it had to do with the total weight. These findings support the preference for concrete pavements on roads likely to carry the heavier trucks.

A more comprehensive study on truck weights is the August, 2000 report by the US Department of Transportation "Comprehensive Truck Size and Weight Study" accessed at <http://www.fhwa.dot.gov/reports/tswstudy/TSWfinal.htm>, but it does not expressly address the Michigan question re higher gross weights with more axels.

Bottom line: This has been a very contentious issue that has been discussed many times by the legislature. The obvious desire of the proponents is to find a simple, easy solution which does not require additional funding. The evidence is not clear that any reduction in weight limits would accomplish that. Focusing on this issue now would simply be a distraction from the major problem – insufficient funds to properly maintain our roads and bridges.

With that said, however, the current funding proposals would put relatively more burden on the trucking industry than currently, with the four cent per gallon discount on diesel fuel eliminated under HB 5298. Further, the federal fuel tax on gasoline is 18.4 cents per gallon, compared with 24.4 cents per gallon on diesel fuel. <http://www.fhwa.dot.gov/ohim/hs00/fe101a.htm> With fewer miles per gallon fuel efficiency of trucks than automobiles, the trucking industry pays and will continue to pay significantly more per mile than auto owners.

(3) Auditor General's Audit Report. It should be noted, however, that the March, 2011 Audit Report of the Real Estate Division did report a finding that "MDOT should review its fee structure for issuing transport permits to help ensure that fee revenues are sufficient to recover all related costs. . . RED's transport permit fee analysis did not include the dollar amount of damage to Michigan trunkline road and bridge system caused by overweight vehicles and loads." MDOT agreed with the recommendation and

said it would comply.

This latter issue relates to the vehicles that are so large as to require a special permit under MCL 257.725 for being oversize, overweight or oversized AND overweight that wish to operate on Michigan trunkline highways (i.e., do not meet even the weight limits discussed above). The auditor general estimated that MDOT issued approximately 90,000 and 115,000 permits generating \$3.3 million and \$3.8 million of permit fees for fiscal years 2008-09 and 2007-08. Meanwhile, the auditor general estimated that overweight trucks caused \$135 million of damage to Michigan trunkline highways in fiscal year 2008-09.

MCL 257.725 authorizes and requires MDOT to issue the overweight/oversize permits. In contrast to the Auditor General's apparent belief that MDOT should charge more per permit, the statute specifically says, "(3) A jurisdictional authority may issue a special permit and charge a fee that does not exceed the administrative costs incurred authorizing the operation of the following upon a highway". Further, the statute specifically prescribes the level of the permit fees, as also reported on the MDOT website at http://www.michigan.gov/mdot/0,1607,7-151-9623_26662_26679_27267_48606-185333--,00.html#10. The fees currently are \$15 for a single trip permit for an oversize vehicle or \$40 for an oversize/overweight vehicle, or for an extended period permit, \$30 for a 12 month period for an oversize vehicle or \$100 for an overweight vehicle. Therefore, the Auditor General's apparent admonition to MDOT appears misdirected. They contend they relied on a comment in the legislative analysis regarding the legislative intent to recover the cost of the road damage, in direct contradiction to the expressed language in the statute.

The audit report does, however, raise the question whether the legislature should raise the fees. This requires a review of the Auditor General's study. Their report relied upon an extrapolation of Federal Highway Administration (FWA) data for the U.S to the cost of maintaining our highways in Michigan, coming up with \$1.5 billion. They then relied on other FWA studies that allocate 58% of road damage and 22% of bridge damage to combination trucks (i.e., tractor and trailer combinations). They obtained data from MDOT weighing stations that 4.2% of trucks weighed were overweight, that they overweight trucks were 43.5% over the legal weight limits, and using a factor of the "power of four", allocated 17.81% of the total damage calculated to overweight trucks, for a total of \$135 million.

Weaknesses in the study are:

- the assumption that the same percentage overweight that occurred for illegally overweight trucks would apply to overweight trucks operating legally under permit.
- the FWA report upon which the Auditor General's office relied upon for the "power of four", explicitly states that although the power of four was the result of earlier research, "recent reviews ... have concluded that the data show approximately a third power relationship", thus the damage calculated is overstated, even if all of the other assumptions were true.
- the study failed to credit the overweight trucks with any revenue received from fuel taxes and vehicle registration fees.

In conclusion, although the Auditor General's audit findings make good headlines, there appears to be not only little grounds for criticism of MDOT on this issue and but also weak grounds on which to base any change in legislative policy. A review of surrounding state's fee structures shows that Michigan's fees are not all that much different from the other states', although some are a bit higher and some are more graduated on the basis of miles traveled or other factors than are Michigan's. This may be an issue a standing Transportation Committee may wish to review, but I don't expect this to be much, if any, answer to the funding gap we currently have. Even a doubling of the permit fees would bring in less than \$4 million per year more revenue.

12. How should the additional revenue raised be distributed? Proposed Substitute HB 5303/SB 921 (the Commercial Corridor Fund bills)

The problem with the original bills is that the money does not go to where our model indicates the money is needed. (referring to the September, 2011 and March, 2012 studies) MDOT would get much more than the model showed they could effectively use (due to limits on high percentage of the total state trunkline could be worked on each year without excessive construction caused congestion). Further, even with additional money, earlier Excel spreadsheets projecting the impact of the original HB 5303 showed that some local road agencies actually would get less money than they are currently receiving, and I have yet to see a local agency with the funds they really need to run an effective pavement preservation program.

- The proposal assumes \$1.3 billion of new funding from increase in registration fees & increase in fuel taxes with wholesale tax conversion, and a continuation of the \$1.8 billion from current sources.
- This proposal allocates the new money in accordance to the need based on current road condition and applicable costs, rather than the original proposal which allocated money only on the basis of vehicle miles traveled.
- The current "carveouts" be frozen at the 2012 levels, and any additional money going around the formula so that it goes to roads and bridges. Thus, the increase becomes a true "user fee", as I am convinced that people will be more supportive of increased gas taxes and vehicle registration fees if they knew that the money would actually go to fix the roads they are driving on. [The analysis of the history of these carveouts, the purposes for which they exist and the rationale for the current levels (to the extent there is rationale) will be the subject of a separate analysis.]

\$ 25,100,000	Recreation Fund, estimated 2% of fuel taxes; likely to be more								
\$ 17,865,000	Administrative Grants, for MDOT work on behalf of local agencies								
\$ 29,749,200	Interdepartmental Grants to State, Treasury, DNR, DTMB and Auditor General								
\$ 159,906,890	Comprehensive Transportation Fund (2012 CTF allocation from MTF continued), comprised of:								
	108,555,536	for Local Bus Operating assistance to 79 local transit agencies by formulas							
	10,649,549	for Intercity Passenger and Freight programs, including Amtrak, intercity bus, rail freight, and marine programs							
	18,178,283	for Public Transportation Development, including specialized bus services, transit capital investment, vanpooling, and other transit programs.							
	20,179,596	for debt service, work by MDOT on behalf of local transit agencies, and freight and passenger regulatory functions							
	2,343,926	Interdepartmental Grants from Comprehensive Transportation Fund to other state agencies & other MDOT areas							
	115,457	to Attorney General							
	130,312	to Civil Service Commission							
	28,669	to Technology, Management & Budget							
	4,952	to Treasury							
	16,419	to Legislative Auditor General							
	1,035,982	Business support							
	386,441	IT support							
	625,694	Planning							
\$ 16,100,000	Basic Industry Logistics Fund								
	Replaces TEDF Category A, useable for road and rail projects serving basic industries, manufacturing, agriculture and tourism private investment, 2012 level								
\$ 8,000,000	Rail Crossing Signal & Surface Fund								
	Replaces Grade Crossing Program; increased for signal program per HB 4609 (\$5M) and new crossing surface program per SB 544 (\$3M) Enlarged rail grade-crossing program is usable for both signals and road surface, as indicated by safety needs.								

- The basic idea is to "hold harmless" road agencies at their 2012 level of funding as the minimum, called the "MTF Legacy Floor" with the additional money being allocated to road, bridges, and rail

- The September, 2011 and March, 2012 studies were conducted to determine how much additional money it would take to reach the goals of 95% “good or fair” condition on the state trunkline highways and 85% on non-trunkline roads. The study showed how much additional money was needed by federal functional classification, allowing a data driven division of the additional money rather than an arbitrary division.

\$ 1,551,477,026	MTF Legacy Floor			
	Holds MDOT and local units harmless against reductions after 2012 (eliminating "losers", except for 2 road agencies with no public roads). The 1% minimum requirement for non-motorized investment is also fixed at the "hold harmless" 2012 amount			
\$ 80,000,000	Local Bridge Allocation			
	Proposed allocation based on average amount needed per year forecast by the model to address structurally deficient and functionally obsolete bridges			
\$ 100,000,000	Road Equalization Fund			
	Discretionary program to improve the worst federal aid eligible roads under local jurisdictions at start of program; primarily to address safety needs, to sunset in 3-5 years. To be allocated by MDOT with local agencies via a competitive grant program, including matching requirements, adopted annually via transparent APA rulemaking process.			
\$ 1,119,801,884	CCF balance for distribution to roads based on "need" as determined by the "Michigan's Roads Crisis: What Will It Cost to Maintain Our Roads and Bridges? 2012 Update"			
	Proposed Division of "New" Money:			
	State Trunkline			45%
	Federal Aid, Non-Trunkline	% of Total	% Share	35%
	Rural Minor Arterials	5%	2%	
	Rural Major Collectors	56%	19%	
	Other Principal Arterials	8%	3%	
	Urban Minor Arterials	19%	6%	
	Urban Collectors	12%	4%	
	Non-Federal Aid Roads	% of Total	% Share	20%
	Rural Minor Collectors	10%	2%	
	Rural Local	51%	10%	
	Urban Local	38%	8%	
	The allocation to the road agency jurisdictions would be based on the lane miles of paved roads in each jurisdiction of each federal road classification			
	Units without federal-aid-eligible roads receive no CCF distributions (MTF Legacy Floor funds only).			
	Amounts distributed on the basis of functional class are not restricted to use on those routes.			
	Lane-miles are not reduced by 4- to 3-lane conversions for improved operation.			

\$	21,095,000	Interdepartmental Grants current being paid from the State Trunkline Fund would be paid from MDOT allocation:									
	2,817,500	to Attorney General									
	5,697,000	to Civil Service Commission									
	1,388,000	to Technology, Management & Budget									
	10,586,900	to State Police (for safety and data programs)									
	131,600	to Treasury									
	474,600	to Legislative Auditor General									

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disrepair). The money would primarily be allocated to address safety needs, and would sunset in 3-5 years. The money would be allocated by MDOT to local agencies via a competitive grant program, which could include matching requirements, and adopted annually via a transparent Administrative Procedures Act rulemaking process. The reason this is needed is that there are many roads in the state that are in horrible condition that even with increased revenues as shown in the spreadsheet, the local governments will not be able to get the reconstruction done. That is because reconstruction is so expensive and the extra money per local road agency is small in comparison to some of those needed projects.

Samaria Road in Monroe County may be the poster child road in the state for this condition, but I am sure there are many others like it throughout the state. We have explored multiple options for that road, but the only option deemed "viable" is a total reconstruction at a total cost of about \$11 million for the 11 mile stretch. Even under the revised HB 5303 formula I am proposing, the Monroe County Road Commission would get less than \$7 million more per year for the entire county than it is in 2012, and Samaria Road is far from the only one in the county drastically needing help.

Upon inquiry, MDOT responded as follows:

"If this program is created, MDOT should be authorized to develop grant criteria, with only an outline of criteria in statute. Criteria might include:

- difference between an agency's allocation under the CCF vs. the old MTF formulas
- pavement ratings on federal-aid-eligible roads as of the effective date of the program
- traffic volumes
- impact on safety and long-term asset condition

The Road Equalization Fund should sunset in no more than 3 years. This program would be aimed at federal-aid-eligible roads that deteriorated under the existing formula. The grants of \$100,000,000/year might be thought of as a one-time settlement for inequities in the 1951 local formulas. If the new formula is properly designed, no special adjustments should be needed for any agency, and inequities in the 1951 formula should not be perpetuated.

At \$100,000,000/year for 3 years, this is a substantial share of any proposed revenue package, in addition to the local-agency formula share, and would be entrusted to MDOT to award to applicants. It may not be realistic to expect MDOT to evaluate whether one county or municipality has had insufficient distributions under the old Act 51 formula to justify a grant under this program. Local units will not be uniformly expert at making grant applications: smaller units will be at a disadvantage, and the most aggressive grant applicants may not be the most deserving units under the criteria.

A match requirement might also be added to the Road Equalization Fund program. The local match requirement would prevent local agencies from benefitting from neglect of roads, whether through misallocation or failure to raise sufficient local revenue."

- The existing Michigan Transportation Fund (MTF) formula would be abolished.
- There would be no State Transportation Fund share because state trunklines and local roads are covered by the same formula.
- No transition period is needed to Commercial Corridor Fund (CCF) because of hold harmless clause.
- Assumes local option county-wide registration fee or HB 5448 optional property tax is available to augment local funding for roads and transit.

- This distribution would be sunset in 10 years, by the time "catch up" maintenance should be completed, assuming the revenue proposals are crafted to grow with inflation, which the gas tax tied to the wholesale price of gas and vehicle registration fees should do.
- The revised HB 5303 might also provide greater emphasis to the demonstration projects authorized by MCL 247.651i. This was enacted in 2001, but MDOT has not had funds to do many trials in recent years due to a lack of funds. The purpose was to do trials of innovations to test new methods of road construction or maintenance with the goal of discovering more ways to stretch the limited dollars available.

MCL 247.651i should be amended to delete restrictive language, keep the MDOT reporting requirement and add authorization for experimentation without restriction as part of any agency's normal operations. MDOT suggests the following amendment:

"247.651i Demonstration projects.

Sec. 1i. (1) Notwithstanding section 1h, the department may conduct ~~not more than 4~~ pavement demonstration projects ~~each year~~ to evaluate new construction methods, materials, or design. The department may offer or conduct a pavement demonstration project that may be all or a portion of that project using either concrete or asphalt as determined by the department. Each demonstration project shall include measurable goals and objectives for determining the success of that project. The department shall make a final report for each demonstration project following the demonstration life of the project, which may be shorter than the actual pavement life of the material used for the project, that assesses the cost-effectiveness and performance of the pavement materials and design used in the project and compares the results to the pavement material identified under the department's standard pavement selection process.

(2) ~~Demonstration projects shall be selected using any of the following criteria:~~

- ~~(a) Pavement designs intended to increase pavement life expectancy.~~
- ~~(b) Pavement designs intended to improve performance, including, but not limited to, friction, surface stress, reduction of noise, and improvement of ride quality.~~
- ~~(c) Comparisons of performance of various types of pavement.~~

(3) ~~The total cost of contracts awarded for demonstration projects under this section using asphalt and concrete shall not exceed a difference of more than 20% between the respective paving materials in any 2-year period. As used in this subsection, "total costs" means the initial engineer's estimated costs of the pavement design portion of the project.~~

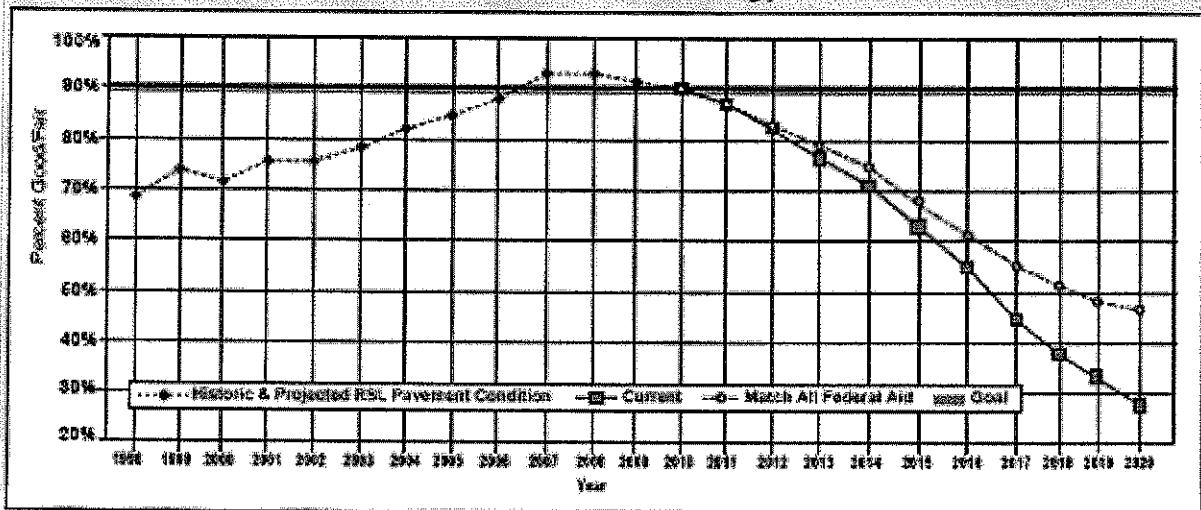
(4) The director shall provide an annual report, not later than February 1 of each year, to the senate and house of representatives transportation standing committees and the senate and house of representatives appropriations subcommittees on transportation regarding the status of ~~each~~ ANY demonstration projects **CONCLUDED IN THE PRIOR YEAR.**"

Bottom line: This will entail a complete rewrite of Act 51, which I am in the process of doing, which would implement the foregoing.

13. Why does the MDOT graph show such a rapid drop in road quality into the future when we can see MDOT has made such good progress towards its 90% good or fair goal since 1997?

MDOT has done a lot of pavement preservation in recent years, as one of the pioneering states with that focus. See point 5 above. What that means is that there are a lot of 3, 5 and 7 year “fixes” that have been used (appropriately so) but whose expiration dates are coming up soon. Gas tax revenues have dropped. Also, with the cost of construction/pavement preservation methods rising, the existing revenue goes less far. With the follow-up preservation methods not able to be done, the quality of the roads deteriorates, and collectively, the average deteriorates quickly. This is NOT a “Chicken Little, the sky is falling” forecast, but reflects reality, in my (not so) humble opinion.

**Historic and Projected RSL Pavement Condition
Current Strategy vs. Match All Federal Aid Strategy**



14. What is the perceived priority ranking of the Transportation Funding Bills?

A conversation I with leadership months ago leads me to believe that the following sequence is desired, following the themes of: efficiency, accountability, other potential sources, and funding sources. Unless the description says it has passed the legislature or one of the houses, the bill resides in the respective Transportation Committee.

Done:

- County Road Commission Transfer to County Allowed. HB 5125/PA 14 of 2012 (Switalski) and HB 5126/PA 15 of 2012 (Zorn)
- County Road Commission Performance Audits. HB 5007/PS 294 of 2012 (Somerville)
- Portion of Undedicated Sales Tax to MTF (SB 351/PA 225 of 2012 (Proos))

Priority 1:

- Best Practices. House Bill 5301 (Price and Olson)/Senate Bill 914 (Kowall), passed the House and sent to the Senate
- Best Practices 2. House Bill 5302 (Roy Schmidt and Lori)/Senate Bill 913, (Kowall), passed the House and sent to the Senate

- Best Practice Submitted by Oakland County. House Bill 5313 (Jacobson), passed the House and sent to the Senate
- Under \$50,000. House Bill 5304 (Ouimet)/Senate Bill 921 (Jansen)
- Open Bidding. House Bill 5305 (Lori)

Priority 2 (as soon as they come from the Senate)

- Regional Transit Authority. House Bill 5309 (Townsend, et.al.)/Senate Bill 909 (Casperson)
- Optional Registration Fee for Transit. House Bill 5311 (Rutledge)/Senate Bill 911 (Johnson), rereferred to the Senate Committee of the Whole
- Rapid Transit Lane Dedication. House Bill 5314 (Hobbs)
- Zoning Enabling Act for RTA. House Bill 5310 (Townsend)/Senate Bill 912 (Johnson and Kowall), rereferred to the Senate Committee of the Whole
- Technical Transit Bill. House Bill 5307 (Liss)/ Senate Bill 916 (Kowall)
- Technical for RTA. House Bill 5308 (Lane)/ Senate Bill 917 (Kowall)

Priority 3 - Distribution of Money

- Commercial Corridor Fund. House Bill 5303 (Talabi)/Senate Bill 921 (Jansen)
- Comprehensive Transportation Fund. House Bill 5306 (Daley)/Senate Bill 915 (Pavlov) (has best practices, but no bill analysis yet)

Priority 4 - New Money for Transportation

- Gas Tax as Percent of Wholesale Price. House Bill 5298 (Olson)/ Senate Bill 918 (Kahn)
- Repeals 15 Cent Diesel Fuel Tax. House Bill 5299 (Olson)/Senate Bill 920 (Kahn)
- Vehicle Registration Fee Increase. House Bill 5300 (Gilbert and Olson)/Senate Bill 919 (Kahn)
- County Optional Registration Fee. House Bill 5312 (Geiss)/Senate Bill 910 (Warren)
- County Optional Millage House Bill 5448 (Gilbert)

15. How is Michigan doing compared to other states in road quality?

Roads may be ranked in many ways, depending on the criteria (road condition, smoothness, safety, congestion, administrative efficiency, bridges deemed structurally deficient, etc., etc. The following report rated states by 11 criteria, and then into a combined rating with Michigan 35th: *19th Annual Highway Report* (September 2010), by the Reason Foundation, at <http://reason.org/news/show/19th-annual-highway-report>

On the other hand, Michigan looked pretty good on <http://www.census.gov/statab/ranks/rank39.html> where TRAFFIC FATALITIES PER 100 MILLION VEHICLE MILES, 2006 were considered, as well as on *Which States Have the Most Dangerous Highways?* at <http://www.carinsurancecomparison.com/which-states-have-the-most-dangerous-highways#Table>

Meanwhile, in a 2010 poll of truckers, Michigan's roads were ranked second to the worst in the nation, <http://www.overdriveonline.com/the-good-the-bad-the-better/?pg=3> This would probably be based on a subjective combination of smoothness and congestion criteria which would be important to truckers.

Under MAP 21, the new federal highway funding authorization, states will be ranked or judged according to road condition in an effort to achieve greater accountability. There is great disagreement on how that should be measured, however. The most universal method will be the International Roughness Index ("IRI"), a worldwide standard for measuring pavement smoothness. This can be mechanically measured, so is objective. The problem is that measuring the smoothness may create incentives to do short run efforts

to get a higher smoothness rating, but which is not the most cost effective in the long run. For example, crack sealing sometimes makes the roads a bit rougher, as do the cutting out and replacing strips of concrete at failed transverse joints on freeways. IRI was used to rank the states in the 2009 Council of State Governments report at

http://www.csg.org/programs/policyprograms/documents/CPM_Transportation.pdf, with Michigan ranking 15 from the bottom (page 9, using 2007 FHWA data) At any rate, Michigan is well positioned in the discussion of the regulation promulgation with Kirk Steudle the President of AASHTO.

My impression is that MDOT and our road agencies (with perhaps a few exceptions) have been doing a reasonably good job with the resources they have had. We must always seek to do an even better job with our hardworking taxpayers' dollars, but I believe it would be inaccurate and non-productive for anyone to try to blame the road agencies for the current condition of our roads. The primary problem is funding – plain and simple.

16. Is there data easily obtainable on the cost of doing nothing for roads?

The TRIP report, http://www.drivemi.com/Portals/0/MI_TRIP_Report_March_2012.pdf, estimates the:

- a) deterioration of the value of our road asset,
- b) costs of damage to vehicles,
- c) increase in accidents/ health care costs,
- d) impacts on tourism,
- e) business losses,
- f) etc.?

I must admit that I am a bit skeptical about the number of jobs that the increased investment in roads the Anderson Economic Group report estimates. For their analysis to be correct, we must assume an economic multiplier for the moneys spent on transportation projects to be higher than the negative multiplier for taxes extracted from people via the increased gas tax and vehicle registration fees. To their credit, they do at least acknowledge that there is a negative impact of taxes, something most studies completely ignore in the support of the interest group who paid for the study who would benefit from the proposed government spending